National Institute of Environmental Health Sciences

Sensitisation to ambrosia in Switzerland: A public health threat in waiting

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Abstract:

BACKGROUND: Ambrosia artemisiifolia (short name Euro Surveillance (Bulletin Europeen Sur Les Maladies Transmissibles; European Communicable Disease Bulletin) Ambrosia common ragweed) pollen is a potent allergen and has recently been found in Switzerland, spreading from the southwest of the country. The aim of this study is to describe Ambrosia sensitisation rates in the population-based SAPALDIA cohort (Swiss Study on Air Pollution and Lung Diseases In Adults) and to test whether an increase in these rates could be observed. METHODS: Among the 6345 participants from 8 areas who provided blood samples in 1991 and 2002, 5823 had valid results for specific IgE against common inhalant allergens tested with Phadiatop. In 2002 Ambrosia sensitisation was measured and positive tests were analysed for Artemisia vulgaris (mugwort). Blood samples taken in 1991 in Ticino and Geneva were also tested for Ambrosia. RESULTS: Sensitisation rate (Phadiatop) did not increase significantly between the two surveys and sensitisation was found in 30% of the participants. A proportion of 7.9% showed specific IgE to Ambrosia pollen. The sensitisation rate in Lugano and Geneva had not changed substantially since 1991. Among those sensitised to Ambrosia 82% also showed specific IgE against Artemisia, suggesting a high rate of cross-reactivity. Only 1.3% were sensitized to Ambrosia alone. The incidence of asthma or hay fever in participants with specific IgE to Ambrosia pollen was not higher than in the general study population. CONCLUSION: Currently Ambrosia pollen does not appear to be an important cause of inhalant allergies in Switzerland. Sensitisation rates are low and have not increased since 1991. Due to cross-reactivity Ambrosia sensitisation may be a consequence of primary sensitisation to Artemisia. Elimination of Ambrosia plants is nevertheless mandatory to avoid a future increase.

Source: http://www.ncbi.nlm.nih.gov/pubmed/19204839

Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

Air Pollution, Ecosystem Changes

Air Pollution: Allergens

Geographic Feature:

resource focuses on specific type of geography

None or Unspecified

Geographic Location:

resource focuses on specific location

Non-United States

Non-United States: Europe

European Region/Country: European Country

Other European Country : Switzerland

Health Impact:

specification of health effect or disease related to climate change exposure

Respiratory Effect

Respiratory Effect: Other Respiratory Effect

Respiratory Condition (other) : Ambrosia sensitisation

Resource Type:

format or standard characteristic of resource

Research Article

Timescale:

time period studied

Time Scale Unspecified